

Abstract

TITLE: HUMAN EPIDERMAL GROWTH-FACTOR RECEPTOR 2 (HER2)
OVER-EXPRESSION FREQUENCY IN GASTRIC CARCINOMA AND ITS
CORRELATION WITH CLINIC-PATHOLOGICAL FINDINGS IN PATIENTS
PRESENTING TO A TERTIARY CARE CENTER IN SOUTH INDIA

DEPARTMENT: SURGERY UNIT 3

NAME OF THE CANDIDATE: SUMIT SINGH

DEGREE AND SUBJECT: MS GENERAL SURGERY

NAME OF THE GUIDE: DR. B. SUDHAKAR CHANDRAN

Objectives: 1. To determine human epidermal growth-factor receptor (HER2) protein-overexpression frequency in patients operated for gastric carcinoma in an Indian population.

2. To determine the correlation of HER-2 positivity with pathological findings and other factors.

Methods: 53 patients who underwent gastrectomy for carcinoma stomach were tested for HER2 positivity in the resected specimen. Representative tissue bits from the tumor were collected and processed. The processed tissue was tested using immunohistochemistry (IHC) on a Ventana Benchmark-XT fully automated machine.

Results: From the data that was collected, HER2 positivity was seen in at least 4 of the 53 gastrectomy specimens amounting to a prevalence of 7.5%. A further 11% of the cases were equivocal for HER2 positivity and would have required additional testing (FISH, SISH) to confirm or deny HER2 positivity. Due to cost constraints, this could not be done. This study has shown the positivity of HER2 overexpression among patients diagnosed with gastric cancer and underwent surgical resection to be in the range of 7.5 to 18 %. Most of the literature on this topic pegs the rate between 7% - 34% and our study confirms the rate of HER2 positivity among patients with gastric carcinoma in the Indian subcontinent is similar to what is found in other parts of the world.

KEYWORDS:

Adenocarcinoma; Stomach; HER2/neu; Immunohistochemistry; Gastric